

Upper Rappahannock River Basin Total Maximum Daily Load Study

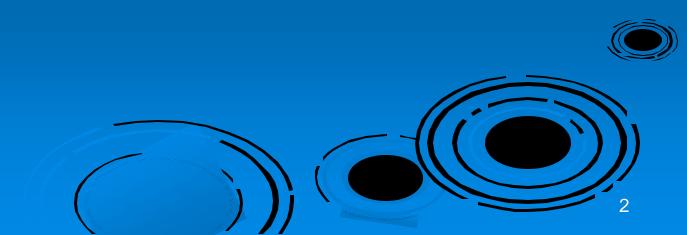
Joint TAC Meeting Culpeper, Virginia December 15, 2006

Meeting Agenda

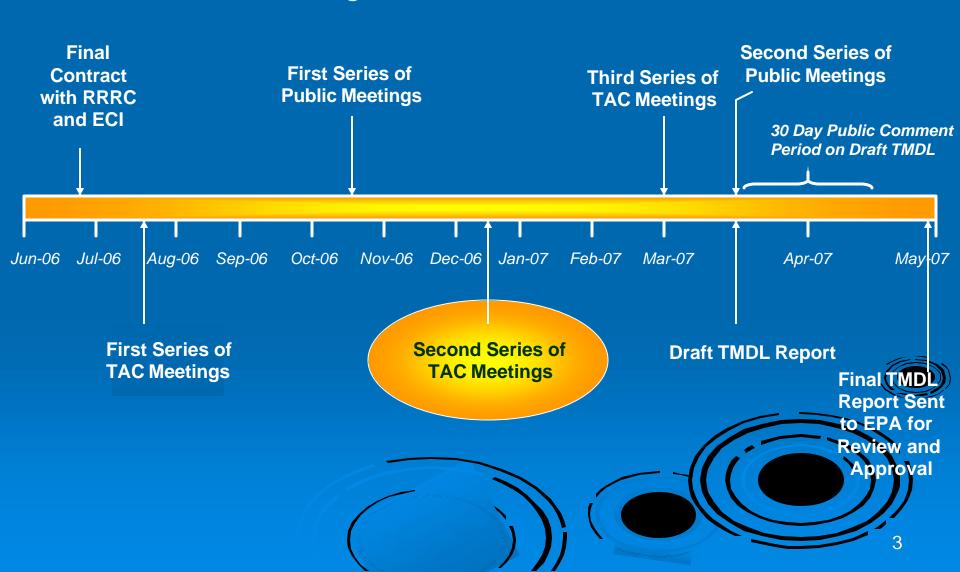
- Review of First Round of Public Meetings Katie Conaway, VA DEQ
- Updated Source Assessment and Model Calibration and Validation

Byron Petrauskas, Engineering Concepts, Inc.

Questions



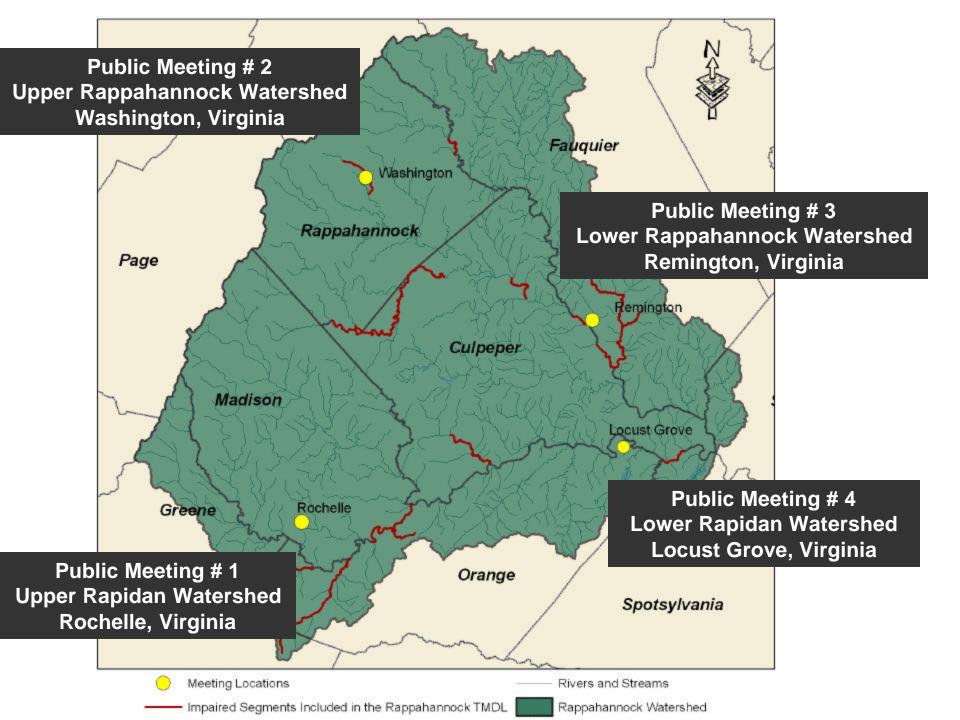
Upper Rappahannock River Basin TMDL Project Milestones



Summary Report on the First Round of Public Meetings

October 2006





Advertisement of Public Meetings

- Notice published in the Virginia Register.
- Notified local newspapers.
- Posted on Rappahannock Rapidan Regional Commission's website and the DEQ website.
- Notified TAC via email. Included a flyer that could be distributed at the discretion of TAC members.
- Two interviews with local newspapers, pre- and postmeetings:
 - Madison County Eagle
 - Rappahannock News
- Postcard Mailings:
 - 1,600 postcards (addresses randomly selected, but covered each geographic area of the project).

Public Meeting # 1 Summary

Location: Mt. Nebo Church, Rochelle, Virginia

Date: Wednesday, October 4, 2006

Stream Segments Addressed:

- Blue Run
- Marsh Run
- Rapidan River
- Unnamed Tributary to Rapidan River

Total Attendance: 20

Hot Topics:

- Impacts to the local landowner.

- Meeting scheduled at same time as Madison County Board of Supervisors Meeting.

Public Meeting # 2 Summary

Location: Rappahannock County Library, Washington, Virginia

Date: Wednesday, October 11, 2006 Stream Segments Addressed:

- Hazel River
- Hughes River
- Rappahannock River
- Rush River

Total Attendance: 29

Hot Topics:

- Biosolids
- TMDL Implementation



Public Meeting # 3 Summary

Location: St. Luke's Church, Remington, Virginia

Date: Tuesday, October 17, 2006

Stream Segments Addressed:

- Browns Run
- Craig Run
- Hazel River
- Marsh Run
- Rappahannock River (2 Segments)

Total Attendance: 11

Hot Topics:

- Biosolids
- Educating the public_about water quality issues

Public Meeting # 4 Summary

Location: Germanna Community College,

Locust Grove, Virginia

Date: Wednesday, October 18, 2006

Stream Segments Addressed:

- Cedar Run

- Rapidan River

Total Attendance: 0

Hot Topics: N/A



Second Round of Public Meetings

- No attendance at the Locust Grove Meeting for the first round of public meetings:
 - Location?
 - Last meeting in the series of four?
 - Need better advertising?
 - No local interest groups?
- Second Round of Public Meetings will be held in March 2007.
- Alternative Plan for Second Round of Public Meetings:
 - Hold three public meetings in the watershed:
 - Madison County, Rappahannock County, Culpeper County
 - Combine the Remington and Locust Grove Meetings (lowest overall attendance at these two meetings).



A C T S

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Additional Information

- 1. Overview of the TMDL Process
- 2. List of all the Impaired Stream Segments addressed in this TMDL Study.
- 3. List of DEQ Monitoring Stations that were used to list the segments in the Upper Rappahannock TMDL Study as impaired.
- 4. Feedback from the first round of public meetings



How a TMDL Project is Managed

- DEQ is the Project Lead for the TMDL Development Phase (DCR provides assistance).
- DEQ subcontracts out the modeling and technical work involved in TMDL Development.
- Stakeholder and public participation:
 - Other VA Agencies, Local Governments, Community Groups, etc. are invited to participate in Technical Advisory Committee meetings.
 - The general public and interested stakeholders are invited to public information meetings.
- Once the study has been approved by the State Water
 Control Board, the Implementation Plan process is begun.
- DCR is the lead for Implementation Plan Development (DEQ provides assistance).

What is a TMDL? Total Maximum Daily Load

A TMDL is a pollution budget:

TMDL = Sum of WLA + Sum of LA + MOS

Where:

TMDL = Total Maximum Daily Load

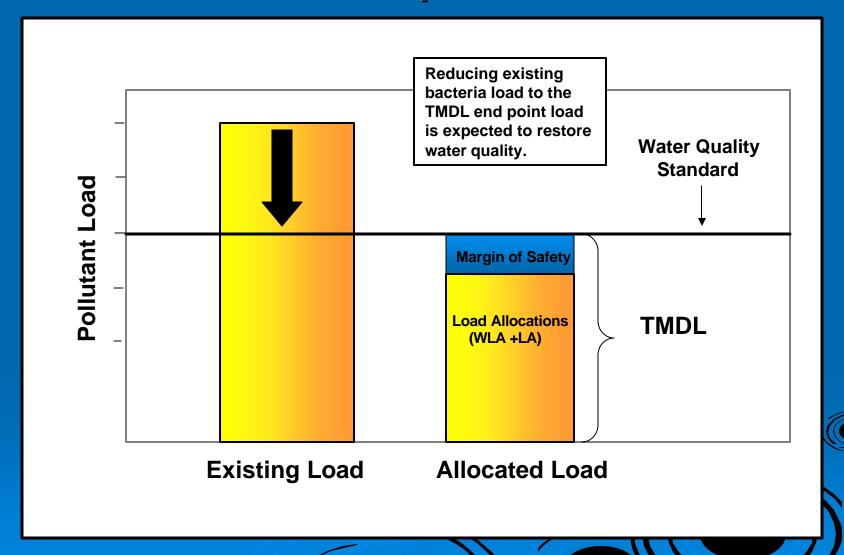
WLA = Waste Load Allocation (point sources)

LA = Load Allocation (nonpoint sources)

MOS = Margin of Safety



An Example TMDL



Required Elements of a TMDL

A TMDL must:

- Be developed to meet Water Quality Standards.
- Be developed for critical stream conditions.
- Consider seasonal variations.
- Consider impacts of background contributions.
- Include wasteload and load allocations (WLA, LA).
- Include a margin of safety (MOS).
- Be subject to public participation.
- Provide reasonable assurance of implementation.

Rappahannock Watershed Technical Advisory Committee						
Stream Name	Locality	Impairment	Length (miles)	Upstream Limit	Downstream Limit	
Hughes River	Culpeper Rappahannock	Bacteria	3.68	Kilbys Run	Hazel River	
Hazel River	Culpeper	Bacteria	16.67	Rt. 707 Bridge	Unnamed Tributary	
Hazel River	Culpeper	Bacteria	3.32	Indian Run	Muddy Run	
Rush River	Rappahannock	Bacteria	4.55	Unnamed Tributary	Big Branch	
Rappahannock River	Fauquier Rappahannock	Bacteria	2.17	Jordan River	UT	
Marsh Run	Fauquier	Bacteria	8.35	Craig Run	Rappahannock River	
Browns Run	Fauquier	Bacteria	2.39	Unnamed Tributary	Marsh Run	
Craig Run	Fauquier	Bacteria	3.61	Headwaters of Craig Run	Marsh Run	
Rappahannock River	Culpeper Fauquier	Bacteria	2.02	Ruffans Run	Tinpot Run	
Rappahannock River	Culpeper Fauquier	Bacteria	2.85	Unnamed Tributary	Marsh Run	

Rapidan Watershed Technical Advisory Committee

Stream Name	Locality	Impairment	Length (miles)	Upstream Limit	Downstream Limit
Blue Run	Orange Albemarle	Bacteria	11.61	Headwaters of Blue Run	Rapidan River
Rapidan River	Culpeper Madison Orange	Bacteria	7.5	Poplar Run	Robinson River
Marsh Run	Greene Madison Orange	Bacteria	5.19	Headwaters of Marsh Run	Rapidan River
Unnamed Tributary to Rapidan River	Madison Orange	Bacteria	2.57	Headwaters of Unnamed Tributary	Rapidan River
Cedar Run	Culpeper	Bacteria	5.4	Buck Run	Rapidan River
Rapidan River	Culpeper Spotsylvania	Bacteria	2.68	Wilderness Run	Middle Run

DEQ Listing Stations for Upper Rappahannock

	Stream Name	Monitoring Station	Station Location	Year First Listed as Impaired	2004 Exceedance Rate Fecal Coliform Standard	2006 Exceedance Rate	
TMDL ID						Fecal Coliform Standard	E. Coli Standard
VAN-E08R-02	Browns Run	3-BOS000.72	Route 653	2002	57% (4 of 7)	100% (3 of 3)	N/A
VAN-E08R-03	Craig Run	3-CRA000.82	Route 656	2004	43% (3 of 7)	100% (3 of 3)	N/A
VAN-E04R-01	Hazel River	3-HAZ018.29	Route 729	2002	20% (4 of 20)	15% (3 of 20)	33% (3 of 9)
		3-HAZ026.16	Route 522	2006	N/A	33% (2 of 6)	33% (2 of 6)
		3-HAZ032.54	Route 644	2006	N/A	21% (3 of 14)	N/A
60076	Hazel River	3-HAZ005.98	Route 625	2006	N/A	36% (5 of 14)	50% (5 of 10)
VAN-E03R-01	Hughes River	3-HUE000.20	Route 644	2004	12% (2 of 17)	16% (3 of 19)	36% (4 of 11)
VAN-E08R-01	Marsh Run	3-MAH000.19	Route 651	1996	21% (3 of 14)	N/A	29% (2 of 7)
		3-MAH004.18	Route 668	1996	44% (4 of 9)	75% (3 of 4)	N/A
VAN-E08R-04	Rappahannock River	3-RPP147.10	Route 15/29	2004	22% (8 of 37)	N/A	39% (5 of 13)
VAN-E01R-03	Rappahannock River	3-RPP175.51	Route 647	2002	16% (3 of 19)	N/A	29% (4 of 14)
60081	Rappahannock River	3-RPP142.36	Route 620	2006	N/A	N/A	29% (2 of 7)
VAN-E05R-01	Rush River	3-RUS005.66	Route 683, upstream of Route 211/522	2002	24% (4 of 17)	22% (4 of 18)	44% (4 of 9) 20

DEQ Listing Stations for the Rapidan River

TMDL ID	Stream Name	Monitoring Station	Station Location	Year First Listed as Impaired	2004 Exceedance Rate Fecal Coliform Standard	2006 Exceedance Rate	
						Fecal Coliform Standard	E. Coli Standard
VAN-E13R-01 Blu		3-BLU002.60	Route 20	2002	40% (8 of 20)	35% (7 of 20)	50% (3 of 6)
	Blue Run	3-BLU006.44	Bridge for an unnamed road through Tibbstown	2006	N/A	40% (2 of 5)	N/A
VAN-E16R-01	Cedar Run	3-CED000.59	Route 522	2004	25% (5 of 20)	15% (2 of 13)	N/A
		3-CED003.52	Route 652	N/A	N/A	38% (3 of 8)	100% (3 of 3)
VAN-E13R-03	Marsh Run	3-MAS001.55	Route 644	2004	67% (2 of 3)	31% (4 of 13)	N/A
VAN-E13R-02	Rapidan River	3-RAP045.08	Route 15	2002	29% (10 of 35)	N/A	43% (6 of 14)
VAN-E18R-01	Rapidan River	3-RAP006.53	Route 610	2002	32% (12 of 38)	N/A	58% (7 of 12)
VAN-E13R-04	Unnamed Tributary to Rapidan River	3-XEZ000.12	Route 634	2004	100% (2 of 2)	43% (3 of 7)	40% (2 of 5)

* In order for a waterbody to be <u>listed</u> as impaired:

- 1. There must be at least two exceedances of the water quality criterion
- 2. Greater than 10.5% of the total samples must be exceedances.

Summary of Changes in Primary Contact Criteria

Indicator	Status	Instantaneous Maximum (cfu/100mL)	Geometric Mean (cfu/100 mL)	
Fecal Coliform	Old	1,000	200	
E. coli	New	235	126	
Fecal Coliform	Interim	400	200	

- Changes went into effect on January 15, 2003
- Both New E. coli and Interim Fecal Coliform criteria apply
- Fecal coliform criteria will be phased out entirely once 12 E. coli samples have been collected or after June 30, 2008

Public Feedback Concerning Public Meetings

- Advertise public meetings on the following websites:
 - http://www.rappflow.org/
 - http://www.rappnet.org/
 - http://rappvoice.com/
 - http://www.rlep.org/

(Rappahannock League of Environmental Protection)

Provide more advance notice of the meetings

